AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

Listing of Claims:

1.   (Currently Amended): A ~~pattern detecting~~ method of detecting a target

pattern in a device forming region on a mask comprising:

        selecting, from among a group of ~~device~~ patterns included in a region near

[[a]] the target pattern, the region being in [[a]] the device forming region, ~~as an~~

~~alignment pattern in the device forming region, patterns whose~~ a pattern having a

barycenter ~~positions~~ position at a barycenter of the pattern in a first direction, the

barycenter position not being displaced from a predetermined barycenter ~~are not changed~~

even if the patterns are deformed ~~by bringing the patterns close to each other or by a~~

~~difference of density of the patterns at the time of pattern forming,~~ when the patterns are

formed on the mask, as an alignment pattern in the device forming region, the alignment

pattern for setting a position at which the detection of the target pattern is performed;

        setting [[a]] the barycenter position of the alignment pattern in the first

direction as alignment reference coordinates[[,]] ; and

        detecting the target pattern based on the alignment reference coordinates.

2.   (Currently Amended): The ~~pattern detecting~~ method according to claim 1,

wherein ~~patterns which have the same distances~~ a pattern that is equally distant from two

of the patterns ~~those which are~~ adjacent ~~on both sides~~ to the pattern in the first direction

are is selected as the alignment ~~patterns~~ pattern.

3.   (Currently Amended): The ~~pattern detecting~~ method according to claim 1, wherein from among adjacent patterns which are adjacent to each other in the first direction, ~~those which are~~ a pattern separated from ~~each other at such~~ the adjacent patterns by a distance that ~~the patterns are not deformed by bringing the patterns close to each other and by a difference of density of the patterns are~~ does not cause deformation of the adjacent patterns is selected as the alignment ~~patterns~~ pattern.

4.   (Currently Amended): The ~~pattern detecting~~ method according to claim 1, further detecting the alignment pattern in the device forming region based on a reference position provided outside the device forming region after the alignment reference coordinates are ~~determined~~ set and before the target pattern is detected based on the alignment reference coordinates.

5.   (Currently Amended): A ~~pattern detecting~~ method of detecting a target pattern in a device forming region on a mask, comprising:

selecting, from among a group of ~~device~~ patterns included in a region near [[a]] the target pattern, the region being in [[a]] the device forming region, ~~as an alignment pattern in the device forming region, patterns whose~~ a pattern having a barycenter ~~positions~~ position at barycenters of the pattern in first and second directions, the barycenter position not being displaced from a predetermined barycenter ~~are not changed~~ even if the patterns are deformed ~~by bringing the patterns close to each other or~~

3

~~by a difference of density of the patterns at the time of pattern forming,~~ when the patters are formed on the mask, as an alignment pattern in the device forming region, the alignment pattern for setting a position at which the detection of the target pattern is performed;

setting [[a]] the barycenter position of the alignment pattern ~~in the first and second directions~~ as alignment reference coordinates, and

detecting the target pattern based on the alignment reference coordinates.

6.   (Currently Amended): The ~~pattern detecting~~ method according to claim 5, wherein ~~patterns which have the same distances~~ a pattern that is equally distant from ~~those which are~~ two of the patterns adjacent ~~on both sides~~ to the pattern in the first or second direction ~~are~~ is selected as the alignment ~~patterns~~ pattern.

7.   (Currently Amended): The ~~pattern detecting~~ method according to claim 5, wherein from among adjacent patterns which are adjacent to each other in the first or second direction, ~~those which are~~ a pattern separated from ~~each other at such~~ the adjacent patterns by a distance that does not cause deformation of the adjacent patterns ~~the patterns are not deformed by bringing the patterns close to each other and by a difference of density of the patterns are~~ is selected as the alignment ~~patterns~~ pattern.

8.   (Currently Amended): The ~~pattern detecting~~ method according to claim 5, further detecting the alignment pattern in the device forming region based on a reference position provided outside the device forming region after the alignment reference

coordinates are ~~determined~~ set and before the target pattern is detected based on the

alignment reference coordinates.

9.   (Currently Amended): A ~~pattern checking~~ method of checking a target

pattern in a device forming region on a mask, the method comprising:

selecting, from among a group of ~~device~~ patterns included in a region near

[[a]] the target pattern, the region being in [[a]] the device forming region, ~~as an~~

~~alignment pattern in the device forming region, patterns whose~~ a pattern having a

barycenter ~~positions~~ position in a first direction, the barycenter position not being

displaced from a predetermined barycenter ~~are not changed~~ even if the patterns are

deformed ~~by bringing the patterns close to each other or by a difference of density of the~~

~~patterns at the time of pattern forming~~ when the patters are formed on the mask, as an

alignment pattern in the device forming region, the alignment pattern for setting a

position at which the detection of the target patter is performed;

setting [[a]] the barycenter position of the alignment pattern in the first

direction as alignment reference coordinates[[,]];

detecting the target pattern based on the alignment reference

coordinates[[,]]; and

checking the ~~detected~~ target pattern detected.

10.   (Currently Amended): A ~~pattern correcting or processing~~ method of

correcting or processing a pattern in a device forming region on a mask, the method

comprising:

selecting, from among a group of ~~device~~ patterns included in a region near

[[a]] the target pattern, the region being in [[a]] the device forming region, ~~as an~~

~~alignment pattern in the device forming region, patterns whose~~ a pattern having a

barycenter ~~positions~~ position at a barycenter pattern in a first direction, the barycenter

position not being displaced from a predetermined barycenter ~~are not changed~~ even if the

patterns are deformed ~~by bringing the patterns close to each other or by a difference of~~

~~density of the patterns at the time of pattern forming~~ when the patterns are formed on the

mask, as an alignment pattern in the device forming region, the alignment pattern for

setting a position at which the detection of the target pattern is performed;

setting [[a]] the barycenter position of the alignment pattern in the first

direction as alignment reference coordinates[[,]];

detecting the target pattern based on the alignment reference

coordinates[[,]]; and

correcting or processing the ~~detected~~ target pattern detected.

11.   (Currently Amended): A ~~pattern detecting~~ device detecting a target pattern

in a device forming region on a mask, the device comprising:

[[a]] an alignment reference setting unit which

selects, from among a group of ~~device~~ patterns included in a region

near [[a]] the target pattern, the region being in [[a]] the device forming region, ~~as an~~

~~alignment pattern in the device forming region,~~ a pattern having a ~~patterns whose~~

barycenter ~~positions~~ position at a barycenter of the pattern in a first direction, the

barycenter position not being displaced from a predetermined barycenter ~~are not changed~~

even if the patterns are deformed ~~by bringing the patterns close to each other or by a difference of density of the patterns at the time of pattern forming,~~ when the patters are formed on the mask, as an alignment pattern in the device forming region, the alignment pattern for setting a position at which the detection of the target pattern is performed, and

sets [[a]] the barycenter position of the alignment pattern in the first direction as alignment reference coordinates[[,]]; and

a target pattern detecting unit which detects the target pattern based on the alignment reference coordinates.

12. (Currently Amended): The ~~pattern-detecting~~ device according to claim 11, wherein ~~patterns which have the same distances~~ a pattern that is equally distant from ~~those which are~~ two of the patterns adjacent ~~on both sides~~ to the pattern in the first direction ~~are~~ is selected as the alignment ~~patterns~~ pattern.

13. (Currently Amended): The ~~pattern-detecting~~ device according to claim 11, wherein from among adjacent patterns which are adjacent to each other in the first direction, ~~those which are~~ a pattern separated from ~~each other at such~~ the adjacent patterns by a distance that ~~the patterns are not deformed by bringing the patterns close to each other and by a difference of density of the patterns are~~ does not cause deformation of the adjacent patterns is selected as the alignment ~~patterns~~ pattern.

14. (Currently Amended): A ~~pattern-detecting~~ device detecting a target pattern in a device forming region on a mask, the device comprising:

7

[[a]] an alignment reference setting unit which

selects, from among a group of ~~device~~ patterns included in a region

near [[a]] the target pattern, the region being in [[a]] the device forming region, ~~as an~~

~~alignment pattern in the device forming region, patterns whose~~ a pattern having a

barycenter ~~positions~~ position at barycenters of the pattern in first and second directions,

the barycenter position not being displaced form a predetermined barycenter ~~are not~~

~~changed~~ even if the patterns are deformed ~~by bringing the patterns close to each other or~~

~~by a difference of density of the patterns at the time of pattern forming,~~ when the patters

are formed on the mask, as an alignment pattern in the device forming region, the

alignment pattern for setting a position at which the detection of the target pattern is

performed, and

sets [[a]] the barycenter position of the alignment pattern ~~in the~~

~~first and second directions~~ as alignment reference coordinates[[,]]; and

a target pattern detecting unit which detects the target pattern based on the

alignment reference coordinates.

15.   (Currently Amended): The ~~pattern detecting~~ device according to claim 14,

wherein ~~patterns which have the same distances~~ a pattern that is equally distant from

~~those which are~~ two or the patterns adjacent ~~on both sides~~ to the pattern in the first or

second direction ~~are~~ is selected as the alignment ~~patterns~~ pattern.

16.   (Currently Amended): The ~~pattern detecting~~ device according to claim 14,

wherein from among adjacent patterns which are adjacent to each other in the first or

second direction, ~~those which are~~ a pattern separated from ~~each other at such~~ the adjacent

patterns by a distance that ~~the patterns are not deformed by bringing the patterns close to~~

~~each other and by a difference of density of the patterns are~~ does not cause deformation

of the adjacent patterns is selected as the alignment ~~patterns~~ pattern.

17.   (Currently Amended): A ~~pattern checking device~~ device checking a target

pattern in a device forming region on a mask, the device comprising:

[[a]] an alignment reference setting unit which

selects, from among a group of ~~device~~ patterns included in a region

near [[a]] the target pattern, the region being in [[a]] the device forming region, ~~as an~~

~~alignment pattern in the device forming region,~~ ~~patterns whose~~ a pattern having a

barycenter ~~positions~~ position at a barycenter of the pattern in a first direction, the

barycenter position not being displaced from a predetermined barycenter ~~are not changed~~

even if the patterns are deformed ~~by bringing the patterns close to each other or by a~~

~~difference of density of the patterns at the time of pattern forming,~~ when the patterns are

formed on the mask, as an alignment pattern in the device forming region, the alignment

pattern for setting a position at which the detection of the target pattern is performed, and

sets [[a]] the barycenter position of the alignment pattern in the

first direction as alignment reference coordinates[[,]];

a target pattern detecting unit which detects the target pattern based on the

alignment reference coordinates[[,]]; and

a checking unit which checks the ~~detected~~ target pattern detected.

9

18.   (Currently Amended): A ~~pattern correcting or processing device~~ <u>device</u>

<u>correcting or processing a pattern in a device forming region on a mask, the device</u>

comprising:

[[a]] <u>an</u> alignment reference setting unit which

selects, from among a group of ~~device~~ patterns included in a region

near [[a]] <u>the</u> target pattern<u>, the region being</u> in [[a]] <u>the</u> device forming region, ~~as an~~

~~alignment pattern in the device forming region, patterns whose~~ <u>a pattern having a</u>

barycenter ~~positions~~ <u>position at a barycenter of the pattern</u> in a first direction<u>, the</u>

<u>barycenter position not being displaced from a predetermined barycenter</u> ~~are not changed~~

even if <u>the</u> patterns are deformed ~~by bringing the patterns close to each other or by a~~

~~difference of density of the patterns at the time of pattern forming,~~ <u>when the patterns are</u>

<u>formed on the mask, as an alignment pattern in the device forming region, the alignment</u>

<u>pattern for setting a position at which the detection of the target pattern is performed,</u> and

sets [[a]] <u>the</u> barycenter position of the alignment pattern in the

first direction as alignment reference coordinates[[,]]<u>;</u>

a target pattern detecting unit which detects the target pattern based on the

alignment reference coordinates[[,]]<u>;</u> and

a correcting/processing unit which corrects or processes the ~~detected~~ target

pattern <u>detected</u>.

19.   (Currently Amended): A computer program containing instructions which

when executed on a computer causes the computer to perform the steps of:

selecting, from among a group of ~~device~~ patterns included in a region near

10

[[a]] the target pattern, the region being in [[a]] the device forming region, as an

alignment pattern in the device forming region, patterns whose a pattern having a

barycenter positions position at a barycenter of the pattern in a first direction, the

barycenter position not being displaced from a predetermined barycenter are not changed

even if the patterns are deformed by bringing the patterns close to each other or by a

difference of density of the patterns at the time of pattern forming, when the patterns are

formed on the mask, as an alignment pattern in the device forming region, the alignment

pattern for setting a position at which the detection of the target pattern is performed,

setting [[a]] the barycenter position of the alignment pattern in the first

direction as alignment reference coordinates[[,]]; and

detecting the target pattern based on the alignment reference coordinates.

20.   (Currently Amended) A computer program containing instructions which

when executed on a computer causes the computer to perform the steps of:

selecting, from among a group of device patterns included in a region near

[[a]] the target pattern, the region being in [[a]] the device forming region, as an

alignment pattern in the device forming region, patterns whose a pattern having a

barycenter positions position at barycenters of the pattern in first and second directions,

the barycenter position not being displaced form a predetermined barycenter are not

changed even if the patterns are deformed by bringing the patterns close to each other or

by a difference of density of the patterns at the time of pattern forming, when the patterns

are formed on the mask, as an alignment pattern in the device forming region, the

alignment pattern for setting a position at which the detection of the target pattern is

performed, and

setting [[a]] the barycenter position of the alignment pattern in the first and

second directions as alignment reference coordinates[[,]]; and

detecting the target pattern based on the alignment reference coordinates.